

the twenty-eight persons treated, seven have recovered; that is to say, they have regained the weight lost, their urine was diminished in quantity to about the usual standard, and contained no sugar, and they expressed themselves as being 'fit for their work, and in as good health as they ever were.' Three died; two from disease of the chest, and the other from dysentery, complicated with effusion of pus in the left pleura; and seven still remain under treatment. Of the remaining eleven, while I have lost sight of several from the fact that they were at considerable distance from town, I hold letters from others, expressing their thanks for benefit derived from the treatment. In thirteen of those cases, organic disease, and chiefly of the lungs, could be detected. I may finally remark that only a few of those cases had not been previously under the treatment of other medical men, so that there could be no mistake in the diagnosis."

12. *Sugar in the Urine of Women in Childbed and while Nursing; and in some Women during Pregnancy.* By Dr. HYPOLYTE BLOT.—Up to the present time the presence of sugar in the urine has been considered by physicians as a pathognomonic sign of one of the gravest of maladies, diabetes. Numerous researches which I have engaged in, and which I have now the honour of bringing before the Academy, have furnished me with results which, at least in some degree, diminish the value of glucosuria as a diagnostic symptom of disease. In fact, it clearly appears from these researches, that sugar normally exists in the urine of all women in childbed, of all women while nursing, and of a certain number even during pregnancy.

I would say, in order to give more weight to the results which I have obtained, that in my investigation I have associated with myself, for the chemical part of the work, M. Reveil, Professor to the School of Pharmacy, and that in several instances I have had recourse to M. Bertholot, whose beautiful works on organic chemistry are well known. Most of the facts mentioned in the following extract have been, moreover, shown by me to a great number of physicians, and in particular to two members of the Academy, M. Rayer and M. C. Bernard.

In order to arrive at the demonstration of the fact which I announce, I have had recourse to all the means generally employed to detect sugar in a liquid. They have been used as follows: first, the urine experimented on has been treated by the test of the solution of copper and potass. The solution of Fehling has been always used, and to avoid all error, the urine has been previously treated with acetate of lead, in order to free it from the other matters which might interfere with the reaction of the test. For my later researches this mode of purification has been replaced by another still simpler, more expeditious, and one often employed by M. Claude Bernard in his experiments on glucogenesis; this consists in filtering through animal charcoal. As another reactive, I employed the caustic alkalies, potass and lime, which give with the urine a brown colour, more or less deep.

The third and principal means of proving the presence of sugar to which I have had recourse is the fermentation by the addition of yeast; and I have constantly obtained, on the one part, alcohol, easily recognized by its peculiar characters; and on the other, carbonic acid, readily absorbed by potass. I would add that I ascertained by experiment that the liquid residue of fermentation no longer was capable of reducing the copper in the solution of Fehling. Usually the process of fermentation (at a moderate temperature between 30° and 55°) took from twelve to twenty-four hours to be completed. Lastly, having slightly concentrated and perfectly discoloured the urine to be examined, I could see, thanks to the kindness of M. Bertholot, that this urine caused the plane of polarization to deviate to the right.

It thus appears that the main fact which I wish to establish cannot be doubted, viz., that sugar exists normally in the urine of all women in childbed, of all women when nursing, and of a considerable number of women during pregnancy. Since the urine of such persons presents all the characteristics which belong to urine containing sugar: 1st, reducing the copper in the cupro-potassic liquid of Fehling; 2d, turning brown when boiled with solution of caustic potash, or lime; 3d, yielding, on fermentation, alcohol and carbonic acid; 4th, causing polarized light to deviate to the right.

Let us next see in what condition this glucosuria is met with.

In all pregnant women (forty-five times out of forty-five cases examined) it is at the moment the milk secretion commences that the sugar makes its appearance in the urine in sufficient quantity to be detected. In many women it only appears at this epoch; in some it appears earlier, but usually in very small quantity.

If the secretion of milk continues, sugar continues to be passed in the urine with certain daily variations to be afterwards explained.

When the secretion of milk is abundant, the proportion of sugar is, in general, great; when the milk is scanty, the urine contains little sugar; thus an examination of the urine may serve, in some degree, to indicate the value of a nurse. If the milk secretion is diminished or dried up from any cause whatever, but especially by the development of any morbid state, the sugar diminishes, and completely disappears; if the health improves, and the milk returns, the sugar reappears in the urine. Lastly, the urine continues to contain sugar so long as the secretion of milk persists. I have found a very appreciable quantity in a woman who continued to give milk for twenty-two months. It is unnecessary to say that such persons present no symptoms of diabetes; on the contrary, that in general the better the health, the more rich in sugar is the urine.

When lactation ceases the sugar disappears from the urine; quickly in women who do not nurse, more slowly in those who having nursed begin to wean their children. In the latter, the disappearance of the sugar offers some peculiarities—thus, I have happened to find it one day and not the next, and yet detect it again on the third; but it constantly occurs that the amount of sugar is reduced to a very small proportion from the time when the tumefaction of the mammary fluid consequent on weaning has subsided. From these considerations it seems impossible not to conclude that there is a close connection between this physiological glucosuria and the secretion of milk. I have already stated that the quantity of sugar varies in different individuals, and at different periods of lactation. I now add, that it is ordinarily present in much smaller quantities than in diabetes. The quantity which I have obtained from different specimens varied from 1, 2, even up to 12 parts in 1,000.

Among women during pregnancy, sugar was detected in the urine of about one-half of those observed; I believe, though I cannot positively affirm the fact, that this peculiarity was met with when the sympathetic phenomena of pregnancy, as regards the mammæ, were very well developed; it was wanting, on the contrary, when the mammæ remained, so to speak, indifferent to what was going on in the uterus.

This passing of sugar in the urine during lactation, so easily recognized in women, I naturally concluded took place in other mammalia, and, indeed, I have observed the phenomenon in the cow. In short, in nine observations made on animals of this sort, I have detected the presence of sugar in nine, that is, in all observed. If the Academy will allow me, at another meeting I shall communicate the result of my future investigations.

Conclusions:—

1st. Glucosuria occurs in all women in childbed; in all women while nursing, and in about one-half of all pregnant women.

2d. This interesting fact is proved by the four tests already mentioned.

3d. This secretion of sugar in the urine diminishes considerably in activity, and even ceases during morbid conditions, but returns with returning health and lactation.

4th. The physiological glucosuria of women under these circumstances is in immediate connection with the secretion of milk.

5th. This glucosuria is not confined to the human female.—*Dub. Hosp. Gaz.*, Nov. 15, 1856, from *Bull. Gén. de Thérapeutique*.

13. *Presbyopia in Bright's Disease*.—M. TROUSSEAU states, that the diagnosis of doubtful cases is very often much assisted by ascertaining that there has been an increase of presbyopia, requiring a rapid increase in the power of the spectacles. Whenever we observe this, in a marked degree, we must always examine whether the patient is not suffering from Bright's disease or from diabetes